



**STATE OF CALIFORNIA
CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL COAST REGION
895 Aerovista Place, Suite 101 • San Luis Obispo • CA 93401-7906**

**REVISED MONITORING AND REPORTING PROGRAM NO. R3-2003-0011
Waste Discharger Identification No. 3 420301003**

for

**TAJIGUAS CLASS III LANDFILL
SANTA BARBARA COUNTY**

PART I: DATA COLLECTION

Unless otherwise indicated, all monitoring and observations shall be reported as outlined in Part III.

A. MONITORING AND REPORTING FREQUENCY

The Discharger shall monitor the Landfill in accordance with the following sampling schedule(s). Monitoring locations are shown on **Attachment A-1**. Sampling, analyses, and reporting are also discussed in and shall comply with PART II Sampling and Analytical Procedure, and PART III Reporting. Data collection shall occur at the specified monitoring frequency. Quarterly monitoring periods: Winter, January 1 - March 31; Spring, April 1 - June 30; Summer, July 1 - September 30; Fall, October 1 - December 31. Sampling events for separate quarterly monitoring periods shall not occur within thirty days of each other. Semi-annual reports are due **July 31** and **January 31**. Annual monitoring requirements may be carried out anytime during the year that yields a representative sample for the parameter being measured. The annual report is due **January 31** and may be included with the concurrent semi-annual report.

B. SITE INSPECTIONS

Inspect the Landfill and its boundaries following each storm which produces storm water discharge and at least quarterly. In addition to Standard Observations, record weekly precipitation totals and tabulate total precipitation during the month.

C. INTAKE MONITORING

Record the following parameters associated with waste in-flow:

1. Log of all loads that required special handling prior to discharge (e.g. contaminated soils loads, semi-liquid loads, asbestos loads). The log shall document volume of waste and results of all characterization testing required; and
2. Log of random load checking program. The log shall contain a record of all load checks. For refused loads the following information is required; the type of waste refused, and name, address, and phone number of the party attempting to dispose of the waste.

D. POLLUTION CONTROL SYSTEM(S)

The Discharger shall inspect all pollution control systems (e.g. gas pump and treat, liquid pump and treat, leachate collection) and record the following information as appropriate:

1. **Ground Water/Leachate Collection and Removal System (LCRS #1)**
 - a. Routine operational checks.
 - Monthly - inspect system for containment and collection system integrity. Include monthly inspection check-off sheet with monitoring reports.
 - Perform routine preventive maintenance focused on keeping the system at design operation. All scheduled and un-scheduled maintenance shall be summarized and reported.

b. Data collection.

- Daily - Record water level in the collection trench (distance above trench bottom).
- Weekly - Record volume of liquid extracted. Report weekly volume and monthly and running sub-total. Report disposal method utilized. When more than one disposal method is used, be volume specific for each method.
- Analyze trench water for Monitoring Parameters in Table 4 semi-annually and Table 5 (Constituents of Concern) once every five years. Trench water samples shall be representative of water potentially passing through the trench.
- Using contaminant concentration data and collection volume, compute contaminant mass removed on a semi-annual basis. Report quarterly, annual, and running totals.

2. **Leachate Collection Systems (#2, #3, #4, #5)**

a. Routine operational checks.

- Weekly - inspect entire system for containment and collection system integrity.
- Perform routine preventive maintenance focused on keeping the system at design operation. All scheduled and un-scheduled maintenance shall be summarized and reported.
- Annually -Testing and demonstration of proper operation of the leachate collection system as required by CCR Title 27 §20340(d). Results of annual testing shall be developed in a manner that makes one year's test comparable to previous and subsequent tests. The absence or presence of biofouling shall be specifically addressed in the testing report.

b. Data collection.

- Weekly: Record volume of leachate collected weekly. Report weekly volume, monthly and running sub-totals. Report disposal method utilized. When more than one disposal method is used, be volume specific for each method.
- Analyze leachate for Monitoring Parameters Semi-Annually. Every fifth year analyze for Constituents of Concern. Samples shall be taken directly from the collection header to obtain values representative of water internal to the waste mass.
- When leachate is used on site for any purpose, testing that shows the leachate is non-hazardous shall be conducted semi-annually.
- Using most recent leachate contaminant concentration data and collection volume, compute contaminant mass removed on a semi-annual basis. Report semi-annual, annual, and running totals.

3. **Gas Extraction System(s)**

a. Routine operational checks.

- Monthly - inspect entire system for containment and collection system integrity. Include monthly inspection check-off sheet with monitoring reports.
- Perform routine preventive maintenance focused on keeping the system at design operation. All scheduled and un-scheduled maintenance shall be summarized and reported.
- Annually -Testing and demonstration of proper operation of the collection system. Submit an annual operational summary for the system. The summary shall outline; downtime cause and duration, major system changes.

b. Data collection (required for each separate landfill gas collection system)

- Record volume of gas extracted monthly. Report monthly volume and annual sub-totals. Indicate how volume measurement is made.
- Record volume of gas condensate collected monthly. Report monthly total with quarterly and annual sub-totals. Report disposal method utilized. When more than one disposal method is used, be volume specific for each method.
- Sample gas collection header semi-annually and analyze for VOCs (method TO-14).
- Sample gas condensate semi-annually and analyze for Monitoring Parameters.
- Using semi-annual contaminant concentration data and collection volume, compute contaminant mass removed on a semi-annual basis. Report semi-annual, and running totals.

E. ENVIRONMENTAL MONITORING

1. The Discharger shall monitor groundwater in accordance with the following sampling schedule(s). Monitoring locations are shown on **Attachment A-1**.

**GROUNDWATER MONITORING
TABLE 1**

Sample Location	Monitoring Program		Parameter/Frequency		
	Detection	Corrective	Monitoring Frequency	Monitoring Table	COC Table
MW-1	X		Semi-annually	Table 4	Table 5
MW-2 ¹	X	X	Quarterly	Table 4	Table 5
MW-3 ¹	X	X	Quarterly	Table 4	Table 5
MW-4		X	Quarterly	Table 4	Table 5
MW-10 ¹	X	X	Quarterly	Table 4	Table 5
MW-12	X		Semi-annually	Table 4	Table 5
MW-13	X		Semi-annually	Table 4	Table 5
MW-14	X		Semi-annually	Table 4	Table 5
MW-15	X		Semi-annually	Table 4	Table 5
Okta, Koch, Hart, Well 3, MW-5, MW 5D, MW-8, PW-16, PW-17, PW-18, Well 2, P-20, V-1, V-2, SA-5, SA-2, SA-6, SA-1, SA-4, MW11	X		Quarterly	Piezometric readings	Table 5
Lysimeter LY-1	X		Semi-annually	Table 4	Table 5
Notes:					
<ol style="list-style-type: none"> 1. Wells 2, 3, & 10 are in corrective action monitoring for volatile organic and detection monitoring for inorganic parameters. 2. Sample once every five years for full suite of analytes listed in Table 5. Next sampling event June 2004. 					

2. Groundwater Flow Rate and Direction:

For each monitored groundwater body, the Discharger shall measure the water level in each available well and piezometer at least once each quarter, including the times of expected highest and lowest elevations of the water level. The Discharger shall also determine the presence of horizontal and vertical gradients, groundwater flow rate, and flow direction for the respective groundwater body.

Groundwater elevations for all wells in a given groundwater body shall be measured within a period of time short enough to avoid temporal variations in groundwater flow which could preclude accurate determination of groundwater flow rate and direction (40 CFR §258.53(d)).

3. The Discharger shall monitor surface water in accordance with the following sampling schedule(s). Monitoring locations are shown on **Attachment A-2**.

SURFACE AND STORM WATER MONITORING
TABLE 2

Sample Location	Monitoring Program		Monitoring Parameter Table	Frequency ¹
	Detection	Corrective		
SW-1, SW-2, SW-3, SW-4 ²	X		Table 6	Monthly during the wet season.
Notes: 1. When possible, surface water samples shall be taken within 48 hours following events that produce flow at the sample location. If the 48-hour requirement is not met, the sample must be taken as soon as possible thereafter, the sample event must be flagged and the delay explained in the monitoring report. When flow is initiated by operations (e.g. pumping of a basin) a sample shall be taken upon or shortly after initiating flow. No more than one sample per month for Monitoring Parameters except turbidity and total suspended solids. A minimum of two samples shall be collected. Turbidity and total suspended solids shall be sampled up to four times per month in surface water. 2. SW-4 shall be located near MW-15 with the intention of monitoring surface water leaving the watershed. Interference from Highway 101 discharge shall be avoided.				

4. The Discharger shall monitor landfill gas probes in accordance with the following sampling schedule(s). Monitoring locations are shown on **Attachment A-2**.

LANDFILL GAS PROBE MONITORING
TABLE 3

Sample Location	Monitoring Program		Monitoring Parameter Table	Frequency
	Detection	Corrective		
GP1, GP2, GP3, GP4	X		Table 7	Quarterly

Landfill gas monitoring probes shall be analyzed quarterly and for percent methane. Annually, gas probes that contain methane concentrations above five percent in any single sampling event, shall be analyzed for non-methane volatile organics (Method TO-14b). Additionally, the Discharger shall optimize landfill gas extraction in wells adjacent to probes with elevated methane.



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**GROUNDWATER
MONITORING PARAMETERS
TABLE 4**

Parameter	Method* [†]	Units
Volatile Organic Compounds (including MTBE 1,4 Dioxane)	8260	µg/l
pH, EC, D.O., Temperature, Turbidity	Field	varies
Total Dissolved Solids	160.1	mg/l
Chloride, Sulfate	300	mg/l
Barium, Sodium	6010	mg/l
Iron		mg/l
Mercury	7470	mg/l
Arsenic	7060	mg/l
Nitrate		mg/l
Total Well Depth**	Sounder	feet
Groundwater Elevations	Sounder	feet
* Or most recently approved EPA method that provides the lowest practicable detection limits. [†] Statistical and non-statistical assessment methods, as required by Part III, shall be used to evaluate the sampling results of laboratory-derived parameters. ** Measured every three years or when pumps are pulled.		

**CONSTITUENTS OF CONCERN
TABLE 5**

Constituents	Method**	Units
Antimony	6010	mg/l
Arsenic	7060	mg/l
Barium	6010	mg/l
Beryllium	6010	mg/l
Cadmium	6010	mg/l
Chromium	6010	mg/l
Cobalt	6010	mg/l
Copper	6010	mg/l
Cyanide	9010	mg/l
Lead	7421	mg/l
Mercury	7470	mg/l
Nickel	6010	mg/l
Selenium	7740	mg/l
Silver	6010	mg/l
Sulfide	9030	mg/l
Thallium	7841	mg/l
Tin	6010	mg/l
Vanadium	6010	mg/l
Zinc	6010	mg/l
Chlorophenoxy Herbicides	8150	µg/l
Organochlorine Pesticides	8081	µg/l
PCBs	8082	µg/l
Organophosphorus Pesticides	8141	µg/l
Semi-Volatile Organic Compounds	8270	µg/l
Volatile Organic Compounds, Appendix II ¹ *	8260	µg/l
¹ The Discharger shall analyze for all constituents using the USEPA analytical methods indicated above (or updated method), including all constituents listed in Appendix II to 40 CFR, Part 258 (Subtitle D). * Includes MTBE and 1,4 dioxane. ** Or most recently approved EPA method that provides the lowest practicable detection limits.		

**SURFACE AND STORM WATER
PARAMETERS
TABLE 6**

Parameter	Method*	Units
pH, EC, DO, Temperature, Turbidity	Field	Varies
Nitrate (as Nitrogen)		mg/l
Oil and Grease		mg/l
Total Suspended Solids	160.2	mg/l
Total Organic Carbon	450.1	mg/l
Coliform and Total Bacteria		MPN
Iron	6010	mg/l
* Or most recently approved EPA method that provides the lowest practicable detection limits.		
: After First storm event or first Flush. Samples to be collected from SW-1 and SW-3. One Sample per year.		

**GAS PROBE MONITORING
PARAMETERS
TABLE 7**

Parameter	Method*	Units
Volatile Organic Compounds (including MtBE)	Field and or TO-14b	ppm
Methane	Field	ppm
H ₂ S	Field	ppm
* Or most recently approved EPA method that provides the lowest practicable detection limits.		

PART II: SAMPLING AND ANALYTICAL PROCEDURE

A. SAMPLING AND ANALYTICAL METHODS

Sample collection, storage, and analysis shall be performed according to the most recent version of Standard USEPA Methods (USEPA publication "SW-846"), and in accordance with an approved sampling and analysis plan. Water analysis shall be performed by a laboratory certified for these analyses by the State of California. Specific methods of analysis must be identified. The director of the laboratory whose name appears on the certification shall supervise all analytical work in his/her laboratory and shall sign reports of such work submitted to the Board. In addition, the Discharger is responsible for assuring the laboratory analysis of samples from Monitoring Points meets the following restrictions:

1. The methods of analysis and the detection limits used must be appropriate for the expected concentrations. For detection monitoring of any constituent or parameter that is found in concentrations which produce more than 90% non-numerical determinations (i.e., Trace) in historical data for that medium, the analytical method having the lowest Method Detection Limit (MDL) shall be selected.
2. Trace results (results falling between the MDL and the Practical Quantitation Limit) shall be reported as such.
3. Method Detection Limits and Practical Quantitation Limits shall be derived by the laboratory for each analytical procedure, according to State of California laboratory accreditation procedures. Both limits are defined in Part IV and shall reflect the detection and quantitation capabilities of the specific analytical procedure and equipment used by the laboratory. If the laboratory suspects that, due to a change in matrix or other effects, the true detection limit or quantitation limit for a particular analytical run differs significantly from the laboratory-derived values, the results shall be flagged accordingly, and an estimate of the limit actually achieved shall be included.
4. Quality assurance and quality control (QA/QC) data shall be reported along with the sample results to which it applies. Sample results shall be reported unadjusted for blank results or spike recovery. The QA/QC data submittal shall include:

- a. Method, equipment, and analytical detection limits.
 - b. Recovery rates, an explanation for any recovery rate that is outside the USEPA-specified recovery rate.
 - c. Results of equipment and method blanks.
 - d. Results of spiked and surrogate samples.
 - e. Frequency of quality control analysis.
 - f. Chain of custody logs.
 - g. Name and qualifications of the person(s) performing the analyses.
5. QA/QC analytical results involving detection of common laboratory contaminants in any sample shall be reported and flagged for easy reference.
 6. Non-targeted chromatographic peaks shall be identified, quantified, and reported to a reasonable extent. When significant unknown peaks are encountered, second column or second method confirmation procedures shall be performed in an attempt to identify and more accurately quantify the unknown analyte(s).

B. STATISTICAL ANALYSIS and NON-STATISTICAL METHODS

1. For Detection Monitoring, the Discharger shall use statistical methods to analyze Constituents of Concern and Monitoring Parameters that exhibit concentrations that equal or exceed their respective Method Detection Limit in at least ten- percent of applicable historical samples. The Discharger may propose and use any statistical method that meets the requirements of California Code of Regulations, Title 27, §20415(e)(7). All statistical methods and programs proposed by the Discharger are subject to Executive Officer approval.
2. The Discharger shall use the following non-statistical method for analyzing identified constituents that are detected in less than 10% of applicable historical samples. This method involves a two-step process:
 - a. From constituents to whom the method applies, compile a well specific list of those constituents that exceed their respective Method Detection Limit. The list shall be compiled based on either the data from the single sample or in cases of multiple independent samples, from the sample which contains the largest number of constituents;
 - b. Evaluate whether the listed constituents meet either of two possible triggering conditions. Either, the list, from a single well, contains two or more constituents, or contains one constituent that equals or exceeds its Practical Quantitation Limit. If either condition is met, the Discharger shall conclude that a release is tentatively indicated and shall immediately implement the appropriate re-test procedure under Part III.C.
3. For wells in Corrective Action monitoring, trend analysis shall be used to evaluate the effectiveness of the corrective action(s) being implemented. "Trend analysis" shall include any methods deemed appropriate by the Discharger and approved by the Executive Officer for documenting the effectiveness of corrective action efforts.

C. CONCENTRATION LIMIT DETERMINATION

1. For the purpose of establishing Concentration Limits for Constituents of Concern and Monitoring Parameters detected in greater than ten percent of a medium's samples the Discharger shall:
 - a. Statistically analyze existing monitoring data (Part II), and propose, to the Executive Officer, statistically derived Concentration Limits for each Constituent of Concern and each Monitoring Parameter at each Monitoring Point for which sufficient data exists.
 - b. In cases where sufficient data for statistically determining Concentration Limits does not exist the Discharger shall collect samples and analyze for Constituent(s) of Concern and Monitoring Parameter(s) that require additional data. Once sufficient data is obtained, the Discharger shall submit proposed Concentration Limit(s) to the Executive Officer for approval. This procedure shall take no longer than two calendar years.
 - c. Sample and analyze new Monitoring Points, including any added by this Order, until sufficient data is available to establish a proposed Concentration Limit for all Constituents of Concern and

Monitoring Parameters. Once sufficient data is obtained, the Discharger shall submit the proposed Concentration Limit(s) to the Executive Officer for approval. This procedure shall take no longer than two calendar years.

2. Once established, concentration limits shall be reviewed annually by the Discharger. The past years data will be reviewed for application to revision of concentration limits. When appropriate, new concentration limits shall be proposed.

D. RE-TEST PROCEDURE

1. In the event that the Discharger concludes that a release has been tentatively indicated the Discharger shall carry out the reporting requirements of IV.C.2. And, within 30 days of receipt of analytical results, collect two new suites of samples for the indicated Constituent(s) of Concern or Monitoring Parameter(s) at each indicating Monitoring Point, collecting at least as many samples per Monitoring Point as were used for the initial test.
2. Analyze each of the two suites of re-test data using the same statistical method (or non-statistical comparison), that provided the tentative indication of a release. If the test results of either (or both) of the re-test data suites confirms the original indication, the Discharger shall conclude that a release has been discovered and shall carry out the requirements of Part III.C.
3. Re-tests shall be carried out only for the Monitoring Point(s) for which a release is tentatively indicated, and only for the Constituent of Concern(s) or Monitoring Parameter(s) which triggered the indication. When a member of the VOC composite parameter is re-tested, the result of the entire VOC composite shall be reported. In that case, a re-test shall validate the original release indication even if the detected constituent(s) in the re-test sample(s) differs from those detected in the sample which initiated the re-test;

E. RECORDS TO BE MAINTAINED

Analytical records shall be maintained by the Discharger or laboratory, and shall be retained for a minimum of five years. The period of retention shall be extended during the course of any unresolved litigation or when requested by the Executive Officer. Such records shall show the following for each sample:

1. Identity of sample, Monitoring Point from which it was taken, and individual who obtained the sample;
2. Date and time of sampling.
3. Date and time that analyses were started and completed, and the name of personnel performing each analysis.
4. Complete procedure used, including method of preserving the sample, and the identity and volumes of reagents used.
5. Results of analyses, and Method Detection Limit and Practical Quantitation Limit for each analysis.
6. A complete chain of custody log.

PART III: REPORTING

A. MONITORING REPORT

The summary shall contain at least: A written Monitoring Report shall be submitted semi-annually by January 31 and July 31 of each year. Monitoring Reports will be submitted in an electronic format, with text, tables, figures, laboratory analytical data (MS Excel Format), Graphs, and appendices placed on a **CDROM** in PDF or JPEG format. Accompanying the electronic version of the report will be a hard copy transmittal letter, with signatures of preparers and submitters (in accordance with requirements stated in Waste Discharge Requirements Order No. R3-2003-0011), along with an executive summary of the report text. The Monitoring Report shall address all facets of the Landfill's monitoring. Reports shall include, but should not be limited to, the following:

1. **Letter of Transmittal**

A letter transmitting the essential points of the monitoring data shall accompany each report. The letter shall include a discussion of violations that occurred since the last such report was submitted. If

no new violations have been discovered since the last submittal, this shall be stated in the transmittal letter. Both the monitoring report and the transmittal letter shall be signed by: for private facilities, a principal executive officer at the level of vice president; for public agencies, the director of the agency. The transmittal letter shall contain a statement by the official, under penalty of perjury, that to the best of the signer's knowledge the report is true, complete, and correct.

2. **Site conditions summary**

General discussion of site conditions (geology, climate, 100 year 24 hour storm, and watershed specifics) relative to water quality monitoring.

3. **Narrative**

A narrative discussion of the sites various monitoring and results. Each requirement of Part I shall be specifically discussed.

4. **Graphical Presentation of Analytical Data**

a. For each Monitoring Point in each medium, submit, in graphical format, the complete history of laboratory analytical data. Graphs shall effectively illustrate trends and/or variations in the analytical data. Each graph shall plot a single constituent concentration over time at one (for intra-well comparisons) or more (for inter-well comparisons) monitoring points in a single medium. Maximum contaminant levels (MCL) and/or concentration limits shall be graphed along with constituent concentrations where applicable. When multiple samples are taken, graphs shall plot each datum, rather than plotting mean values.

b. Plot monthly rainfall totals versus monthly total of each individual liquid collection system (e.g. trench, seep drains, leachate collection system.)

5. **Corrective Action Summary**

Discuss the effectiveness of the corrective action measures taken, the effectiveness of the source control measures taken, and propose corrective action and source control modifications and improvements. The reports shall include monitoring data trend analyses, operational summary for the year, an operations plan for next year, and a time schedule for any proposed CAP modification.

6. **Laboratory Results**

Laboratory results and statements demonstrating compliance with Part II.

7. **Sampling Summary**

a. For each monitoring well addressed by the report: a description of; 1) the method and time of water level measurement, 2) the method of purging and purge rate and well recovery time, and 3) field parameter readings.

b. For each monitoring point addressed by the report, a description of the type of sampling device used, its placement for sampling, and a description of the sampling procedure (number of samples, field blanks, travel blanks, and duplicate samples taken; the date and time of sampling; the name and qualifications of the person actually taking the samples; description of any anomalies).

8. **Standard Observations**

Record of Standard Observations (or an inspection journal) made during the Monitoring Period.

9. **Map(s)**

a. A map or aerial photograph showing monitoring locations, relative physical features, and groundwater contours to the greatest degree of accuracy possible.

b. Geologic cross-sections showing details of formations and monitoring wells (zone of completion, perforated interval, sandpack interval). Wells may be projected as necessary to minimize number of cross sections required.

B. ANNUAL SUMMARY REPORT

The Discharger shall submit an annual report to the Board covering the previous monitoring year. The annual Monitoring Period ends December 31. This report may be combined with the Monitoring Report for the period ending December 31 and shall be submitted no later than January 31 each year. The annual report must include the information outlined above and the following:

1. **Discussion**

Include a comprehensive discussion of the compliance record, a review of the past years significant monitoring system and operational changes, a summary of corrective action results and milestones, and a review of completed or commenced construction projects that have water quality significance.

2. **Statistical Limit Review**

Statistically derived concentration limits shall be reviewed annually and revised as necessary. Data collected during the year shall be discussed and considered for inclusion in, and determination of, proposed limits for the coming year. For statistical limits that are changed from the previous year, include a comprehensive discussion of the proposed limit for Executive Officer review and consideration.

3. **Analytical Data**

Complete historical analytical data presented in tabular form and on 3.5" diskettes, in Excel™ format or in another file format acceptable to the Executive Officer.

4. **Leachate Collection System**

Results of annual leachate system testing as required by Part I.D. At sites where leachate is used for dust control, testing that shows the leachate is non-hazardous shall be submitted annually.

5. **Map(s)**

A map, or set of maps, that indicate(s): the type of cover material in place (final, long-term intermediate, or intermediate); updated topographical information; and area filled during past year.

C. **CONTINGENCY REPORTING**

1. **Leachate Seep**

The Discharger shall, within 24 hours, report by telephone concerning the discovery of previously unreported seepage from the disposal area. A written report shall be filed with the Board within seven days, containing at least the following information:

- a. A map showing the location(s) of seepage;
- b. An estimate of the flow rate;
- c. A description of the nature of the discharge (e.g., pertinent observations and analyses); and
- d. A summary of corrective measures taken and a description and time schedule for actions proposed.

2. **Response to an Initial Indication of a Release**

Should the initial statistical or non-statistical comparison (Part II.B) indicate that a new release is tentatively identified, the Discharger shall:

- a. Within 24 hours, notify the Board verbally as to the Monitoring Point(s) and constituent(s) or parameter(s) involved;
- b. Provide written notification by certified mail within seven days of such determination; and
- c. Either of the following:
 - Shall carry out a discrete re-test in accordance with Part II.D. If the re-test confirms the existence of a release or the Discharger fails to perform the re-test within 30 days, the Discharger shall carry out the requirements of Part III.C.4. In any case, the Discharger shall inform the Board of the re-test outcome within 24 hours of results becoming available, following up with written results submitted by certified mail within seven days. Or;
 - Make a determination, in accordance with CCR Title 27, §20420(j)(7), that a source other than the waste management unit caused the release or that the evidence is an artifact caused by an error in sampling, analysis, or statistical evaluation or by natural variation in the groundwater, surface water, or the unsaturated zone.

3. **Physical Evidence of a Release**

If either the Discharger or the Executive Officer determines that there is significant physical evidence of a new release [Title 27 §20385(a)(3)], the Discharger shall conclude that a release has been discovered and shall:

- a. Within seven days notify the Board of this fact by certified mail (or acknowledge the Board's determination);
- b. Carry out the requirements of Part III C.4. for potentially-affected mediums; and

- c. Carry out any additional investigations stipulated in writing by the Executive Officer for identifying the cause of the indication.
4. **Release Discovery Response**
If the Discharger concludes that a new release has been discovered the following steps shall be carried out:
 - a. If this conclusion is not based upon monitoring for Constituents of Concern, the Discharger shall sample for Constituents of Concern at all Monitoring Points in the affected medium. Within seven days of receiving the laboratory analytical results, the Discharger shall notify the Board, by certified mail, of the concentration of Constituents of Concern at each Monitoring Point; this notification shall include a synopsis showing, for each Monitoring Point, those constituents that exhibit an unusually high concentration;
 - b. The Discharger shall, within 90 days of discovering the release, submit a Revised Report of Waste Discharge proposing an Evaluation Monitoring and Reporting Program that:
 - Meets the requirements of Title 27, §20420 and §20425.
 - Satisfies the requirements of 40 CFR §258.55(g)(1)(ii) by committing to install at least one monitoring well directly down-gradient of the center of the release.
 - The Discharger shall, within 180 days of discovering the release, submit a preliminary engineering feasibility study meeting the requirements of Title 27, §20420.
 - The Discharger shall immediately begin delineating the nature and extent of the release by installing and monitoring assessment wells as necessary to assure that the Discharger can meet the requirement [Title 27, §20425] to submit a delineation report within 90 days of when the Board directs the Discharger to begin the Evaluation Monitoring Program.
5. **Release Beyond Facility Boundary**
Any time the Discharger concludes (or the Executive Officer directs the Discharger to conclude) that a release from the Unit has proceeded beyond the facility boundary, the Discharger shall so notify persons who either own or reside upon the land that directly overlies any part of the plume (Affected Persons).
 - a. Initial notification to Affected Persons shall be accomplished within 14 days of making this conclusion and shall include a description of the Discharger's current knowledge of the nature and extent of the release.
 - b. Subsequent to initial notification, the Discharger shall provide updates to Affected Persons, including any persons newly affected by a change in the boundary of the release, within 14 days of concluding there has been any material change in the nature or extent of the release.
 - c. Each time the Discharger sends a notification to Affected Persons (under a. or b., above), the Discharger shall, within seven days of sending such notification, provide the Board with both a copy of the notification and a current mailing list of Affected Persons.

PART IV: DEFINITION OF TERMS

A. AFFECTED PERSONS

Individuals who either own or reside upon the land that directly overlies any part of that portion of a gas or liquid phase release that may have migrated beyond the facility boundary.

B. CONCENTRATION LIMITS

The Concentration Limit for any given Constituent of Concern or Monitoring Parameter in a given monitored medium shall be either:

1. The constituent's statistically determined background value or interval limit, established using an Executive Officer approved method (Part II); or
2. In cases where the constituent's Method Detection Limit (MDL) is exceeded in less than 10% of historical samples, the MDL is the concentration limit (see Part II).

C. CONSTITUENTS OF CONCERN (COC)

A broad list of constituents likely to be in typical municipal solid waste. The Constituent of Concern parameter includes all constituents listed in Code of Federal Regulations, Title 40, Part 258, Appendix II.

Monitoring for Constituents of Concern shall encompass only those constituents that do not also serve as Monitoring Parameters. Analysis of Constituents of Concern shall be carried out once every five years at each of the site's groundwater monitoring points, liquid collection systems (e.g. leachate recovery system) and additionally as required due to an indication of release. **Wells that have not previously been sampled for COCs shall be sampled and analyzed for all COCs within six months of this program becoming effective.**

D. MATRIX EFFECT

Any increase in the Method Detection Limit or Practical Quantitation Limit for a given constituent as a result of the presence of other constituents, either of natural origin or introduced through a release, that are present in the sample being analyzed.

E. METHOD DETECTION LIMIT (MDL)

The lowest concentration at which a given laboratory, using a given analytical method to detect a given constituent, can differentiate with 99% reliability, between a sample which contains the constituent and one which does not. The Method Detection Limit shall reflect the detection capabilities of the specific analytical procedure and equipment used by the laboratory.

F. MONITORED MEDIUM (MEDIA)

Those media that are monitored pursuant to this Monitoring and Reporting Program (groundwater, surface water, vadose zone gas and liquid, leachate, gas condensate, and other as specified).

G. MONITORING PARAMETERS

A short list of constituents and parameters used for the majority of monitoring activity. The Monitoring Parameters for this Landfill are listed in Tables 4, 5, 6, and 7.

H. MONITORING PERIOD (frequency)

The duration of time during which a sampling event must occur. The Monitoring Period for the various mediums and programs is specified in **Part I**. The due date for any given report will be 30 days after the end of its Monitoring Period, unless otherwise stated.

I. PRACTICAL QUANTITATION LIMIT (PQL)

The lowest acceptable calibration standard (acceptable as defined for a linear response or by actual curve fitting) times the sample extract dilution factor times any additional factors to account for Matrix Effect. The PQL shall reflect the quantitation capabilities of the specific analytical procedure and equipment used by the laboratory. PQLs reported by the laboratory shall not simply be restated from USEPA analytical method manuals. Laboratory derived PQLs are expected to closely agree with published USEPA estimated quantitation limits (EQL).

J. STANDARD OBSERVATIONS

For adjacent surface waters, settling ponds, site surface water control systems and discharges, along the perimeter of the property, and at the waste unit(s), the following information shall be recorded and included in monitoring reports:

- Floating and suspended materials of waste origin.
- Discoloration and turbidity.
- Evidence of odors.
- Evidence of beneficial use— presence of water-associated wildlife.
- Flow rate to the receiving waters.
- Evidence of liquid leaving or entering the Unit.
- Evidence of erosion and/or of exposed refuse.
- Storm water discharge locations for evidence of non-storm water discharges during dry seasons, and integrity during wet seasons.
- Evidence of ponded water at any point on the waste management facility.
- Integrity of drainage systems.

K. RECEIVING WATERS

Any surface waters which actually or potentially receives surface or groundwater that pass over, through, or under waste materials or contaminated soils.

L. VOLATILE ORGANIC COMPOSITE MONITORING PARAMETER (VOC_{composite})

VOC_{composite} is a composite parameter that encompasses a variety of VOCs. The constituents addressed by the VOC_{composite} Monitoring Parameter include all VOCs detectable using USEPA Methods, 8260b (water) and TO-14b (gas).

Figure: Figure A-1 Groundwater Lysimeter Monitoring Point Location Map